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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,423	03/01/2004	Elena A. Kharitidi	13768.500	1465
22913 7590 06/27/2007 WORKMAN NYDEGGER (F/K/A WORKMAN NYDEGGER & SEELEY) 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111			EXAMINER WANG, RONGFA PHILIP	
			ART UNIT 2191	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/790,423

Applicant(s)

KHARITIDI ET AL.

Examiner

Philip Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/25/2004</u> | 6) <input type="checkbox"/> Other: _____  |

***Detail Action***

1. This office action is in response to the application filed on 3/1/2004.
2. Claims 1-31 are pending.

***Claim Objections***

3. Claims 2-9 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 2-9, 14-23 recite the limitation of "A method as recited in claim ...". It appears this limitation should be "The method as recited in claim ..." to further limit the method of the respective parent claim.

Claims 11,12, 25-31 recite the limitation of "A computer program product as recited in claim..." It appears this limitation should be "A computer program product as recited in claim..." to further limit the computer program product as the respective parent claim.

Claims 4 and 12 recite the limitation of "in each of at least two XML schema types". It appears it should be "in each of **the** at least two XML schema types" in order to further limit the subject matter of a previous claim.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 13-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13, 24 recite the limitation " the at least two normalized XML schema types " in "an act of generating a hash number for each of the at least two normalized XML schema types; " There is insufficient antecedent basis for this limitation in the claim. Claims 14-23 depend on claim 13 and suffer the same deficiency. Claims 25-31 depend on claim 24 and suffer the same deficiency.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, 9, 10, 12, 15, 20-22, 26, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Lim et al. (PGPub. No.: US 200410064826 A1).

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As per claim 1,

Lim et al. disclose

- an act of identifying at least two XML schema types for which equivalence is to be determined, each of the at least two XML schema types having at least one schema component that can be presented differently in equivalent XML schema types a step for normalizing each of the XML schema types; a step for determining equivalence of the at least two normalized XML schema types ([0062], "As depicted in FIG. 2, the object generator is started 2, and an XML Schema file is inputted 4. Because there are various ways to represent equivalent data models in XML Schema, the schema is normalized 6 to provide an internally standardized representation of the data model." Since an internally standardized representation of data model is provided out of the various ways to represent equivalent data models in XML Schema, therefore at least two XML schema types are identified. ).

As per claim 4,

the rejection of claim 1 is incorporated,

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Lim et al. disclose

- wherein the step for normalizing each of the XML schema types includes writing the at least one schema component in each of the at least two XML schema types according to a unified format and prior to determining equivalence([0062], "As depicted in FIG. 2, the object generator is started 2, and an XML Schema file is inputted 4. Because there are various ways to represent equivalent data models in XML Schema, the schema is normalized 6 to provide an internally standardized representation of the data model." By normalization, a unified format is used prior to determining equivalence. ).

As per claim 9,

the rejection of claim 1 is incorporated,

Lim et al. disclose

- upon determining equivalence, creating a single class that is used interchangeably for each equivalent XML schema type ([0056], "...compiling a data model specification such as XML schema into code...").

As per claims 10, 12,

- they are the computer program product claims corresponding to method claims 1 and 4 respectively and are rejected for the same reason set forth in connection of the rejection of claims 1 and 4 above.

As per claim 15,

the rejection of claim 13 is incorporated,

Lim et al. disclose

- wherein writing the at least one schema component includes rewriting an existing schema component into a new format ([0062], "As depicted in FIG. 2, the object generator is started 2, and an XML Schema file is inputted 4. Because there are various ways to represent equivalent data models in XML Schema, the schema is normalized 6 to provide an internally standardized representation of the data model.").

As per claim 20,

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- it recite the same limitations of claim 9 and is rejected for the same reason set forth for the rejection of claim 20 above.

As per claim 21,

the rejection of claim 13 is incorporated,

Lim et al. disclose

- wherein the at least one component is a schema particle definition (The examiner asserts that a schema particle definition as component is part of W3C recommendation. See <http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/#cParticles>, section 3.9).

As per claim 22,

the rejection of claim 13 is incorporated,

Lim et al. disclose

- wherein the at least one component is a schema attribute (The examiner asserts that a schema particle definition as component is part of W3C recommendation. See <http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/#cParticles>, see section 3.2, 3.3).

As per claims 26, 31,



- they are the computer program product claims corresponding to method claims 15 and 20 respectively and are rejected for the same reason set forth in connection of the rejection of claims 15 and 20 above.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3, 5-8, 11, 13, 14, 16-19, 23-25, 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (PGPub. No.: US 200410064826 A1) in view of Atkinson (US PGPub. No. 2004/0098667).

As per claim 2,

the rejection of claim 1 is incorporated,

Lime et al. do not specifically disclose

- wherein the step for determining equivalence includes creating and comparing hash numbers of the at least two normalized XML schema types.

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However, Atkinson discloses

- wherein the step for determining equivalence includes creating and comparing hash numbers of the at least two normalized XML schema types ([0463], "... Comparing the length or hash representation of two XML data sets...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Atkinson into the teachings of Lime et al. to include the step for determining equivalence includes creating and comparing hash numbers of the at least two normalized XML schema types . The modification would be obvious to one of ordinary skill in the art to want to consistently check data as suggested by Atkinson (0005], line 5, for example).

As per claim 3,

the rejection of claim 1 is incorporated,

Lime et al. do not specifically disclose

- wherein the act of identifying the XML schema types includes identifying XML schema types having the same qname.

However, Atkinson discloses

- wherein the act of identifying the XML schema types includes identifying XML schema types having the same qname ([0181], "...information of type Qname...").

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Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Atkinson into the teachings of Lime et al. to include identifying XML schema types having the same qname.

The modification would be obvious to one of ordinary skill in the art to want to consistently check data as suggested by Atkinson (0005], line 5, for example).

As per claim 5,

the rejection of claim 4 is incorporated,

Lime et al. do not specifically disclose

- wherein writing the at least one schema component includes altering an order of at least two schema components within a single XML schema type.

However, Atkinson discloses

- wherein writing the at least one schema component includes altering an order of at least two schema components within a single XML schema type([0496], "...the potential reordering of the elements in comparing for equality should be included.)).

As per claim 6,

the rejection of claim 5 is incorporated,

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Lime et al. do not specifically disclose

- wherein altering the order includes placing the at least two schema components into alphabetical order

However, Atkinson discloses

- wherein altering the order includes placing the at least two schema components into alphabetical order ([0496], "...the potential reordering of the elements in comparing for equality should be included.)).

As per claim 7,

the rejection of claim 5 is incorporated,

Lime et al. do not specifically disclose

- wherein prior to altering the order, it is determined that the order of the at least two schema components is discretionary

However, Atkinson discloses

- wherein prior to altering the order, it is determined that the order of the at least two schema components is discretionary ([0442], "...items do no have relative ordering...").

As per claim 8,

the rejection of claim 4 is incorporated,

Lime et al. do not specifically disclose

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- wherein the at least one component is a discretionary component that is not explicitly recited in at least one of the XML schema types, and wherein writing the at least one schema component includes writing the at least one schema component for a first time.

However, Atkinson discloses

- wherein the at least one component is a discretionary component that is not explicitly recited in at least one of the XML schema types, and wherein writing the at least one schema component includes writing the at least one schema component for a first time (See Figure 1B for example, where "<bar>" is discretionary.).

As per claim 11,

- they are the computer program product claims corresponding to method claim 3 and is rejected for the same reason set forth in connection of the rejection of claim 3 above.

As per claim 13,

Lim et al. disclose

- an act of identifying at least two XML schema types for which equivalence is to be determined, each of the at least two XML schema types having at least one schema component that can be presented differently in equivalent XML schema types; an act of writing the at least one schema

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component in each of at least two XML schema types according to a custom format; an act of comparing the at least two normalized XML schema types; an act of generating a hash number for each of the at least two normalized XML schema types ([0062], "As depicted in FIG. 2, the object generator is started 2, and an XML Schema file is inputted 4. Because there are various ways to represent equivalent data models in XML Schema, the schema is normalized 6 to provide an internally standardized representation of the data model." Since an internally standardized representation of data model is provided out of the various ways to represent equivalent data models in XML Schema, therefore at least two XML schema types are identified. ).;

Lime et al. do not specifically disclose

- and an act of determining equivalence of the at least two normalized XML schema types when the hash number for each of the at least two normalized XML schema types are the same.

However, Atkinson discloses

- and an act of determining equivalence of the at least two normalized XML schema types when the hash number for each of the at least two normalized XML schema types are the same ([0463], "... Comparing

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the length or hash representation of two XML data sets..." ).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Atkinson into the teachings of Lime et al. to include the step for determining equivalence includes creating and comparing hash numbers of the at least two normalized XML schema types . The modification would be obvious to one of ordinary skill in the art to want to consistently check data as suggested by Atkinson (0005], line 5, for example).

As per claim 14,

the rejection of claim 13 is incorporated,

Lime et al. do not specifically disclose

- wherein the act of identifying the XML schema types includes identifying XML schema types having the same qname.

However, Atkinson discloses

- wherein the act of identifying the XML schema types includes identifying XML schema types having the same qname ([0181], "...information of type QName..." ).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Atkinson into the teachings of Lime et al. to include identifying XML schema types having the same qname.

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The modification would be obvious to one of ordinary skill in the art to want to consistently check data as suggested by Atkinson ([0005], line 5, for example).

As per claim 16,

the rejection of claim 13 is incorporated,

Lime et al. do not specifically disclose

- wherein writing the at least one schema component includes writing a discretionary component into at least one of the XML schema types (See Figure 1B for example, where "<bar>" is discretionary.).

However, Atkinson discloses

- wherein writing the at least one schema component includes writing a discretionary component into at least one of the XML schema types (See Figure 1B for example, where "<bar>" is discretionary.).

As per claims 17-19,

- they recite the same limitations of claims 5-7 respectively and are rejected for the same reasons set forth for the rejections of claims 5-7 above.



As per claim 23,

the rejection of claim 13 is incorporated,

Lime et al. do not specifically disclose

- wherein the at least one component is at least one of a child and a sub-child of a named type .

However, Atkinson discloses

- wherein the at least one component is at least one of a child and a sub-child of a named type ([0170], "... a member of the [children] of an element information item..." ).

As per claims 24,25, 27-30,

- they are the computer program product claims corresponding to method claims 13,14, 16-19 respectively and are rejected for the same reason set forth in connection of the rejection of claims are the computer program product claims corresponding to method claims 13,14, 16-19 above.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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It is noted that any citation [[s]] to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. [[See, MPEP 2123]]

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Wang whose telephone number is 571-272-5934. The examiner can normally be reached on Mon - Fri 8:00AM - 4:00PM. Any inquiry of general nature or relating to the status of this application should be directed to the TC2100 Group receptionist: 571-272-2100.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
WEI ZHEN  
SUPERVISORY PATENT EXAMINER